

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Todd R. Golub, Eric S. Lander, Jill Mesirov, Donna Slonim, and
Pablo Tamayo

Divisional of:

Application No.: 09/544,627
Filed: April 6, 2000

Title: METHODS FOR CLASSIFYING SAMPLES AND ASCERTAINING PREVIOUSLY
UNKNOWN CLASSES

Date: 2/12/02

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REMARKS

Box PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The above-captioned application is a divisional of application number 09/544,627 filed on April 6, 2000 to which priority is claimed under 35 U.S.C. §120.

The related applications paragraph has been revised to include the parent application.

Claims 1-13, 28-33, 67-82, 99-106, 108-117 of U.S. Application No.: 09/544,627, as originally filed, have been omitted and remaining Claims 14-27, 34-66, 83-98, 107, 118-123 have been renumbered sequentially beginning with Claim 1. No new matter has been added.

The instant specification includes claims from Groups III, IV, and VI of the restriction requirement made in the parent case, U.S. Application No. 09/544,627. According to the Examiner, the claims of Group III relate to methods of assigning samples to a class based on a weighted voting analysis, the claims of Group IV are drawn to methods of determining a weighted vote for one or more informative genes, and the claims of Group VI are drawn to methods of classifying a sample based upon gene expression for one or more genes, combined with a model built using a weighted voting analysis. Applicants request that the claims of Groups III, IV, and VI be examined together for the following reasons.

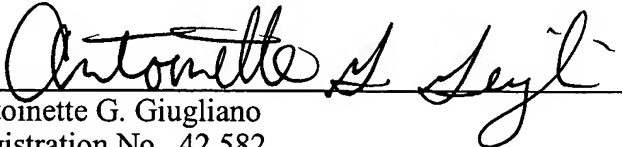
The claims of Groups III, IV, and VI are not both independent and distinct. The claims of Groups III, IV, and VI are not independent because there is a disclosed relationship between two or more subjects disclosed, that is, the subject matter of the groups is connected in operation and effect. The claims of Groups III, IV, and VI are related in operation and effect because they all relate to either classifying a sample based on an analysis of gene expression data performed with a weighted voting scheme (Groups III and VI), or building a model using a weighted voting scheme and gene expression data (Group IV). They are connected in operation and effect because the methods of Group IV result in a weighted voting scheme model that is used to classify samples or assign samples to a class, as set forth in the methods of Groups III and VI. The Claims of Group III and VI clearly indicate that a weighted voting model based on gene expression data is used to classify the samples. Similarly, Groups III and VI are connected in operation and effect because they both use a weighted voting scheme to classify samples based on the gene expression data. The Examiner even grouped claims of Groups III and VI together in the same classification, Class 700, which indicates that the claims are related. Group IV belongs to a closely related class, Class 702. The class definition for Class 700 specifically indicates that class 702 is a related class (See U.S. PTO website). 35 U.S.C. §121 requires a two-pronged test, namely that the inventions be both independent and distinct for a restriction to be proper. Accordingly, even if the Examiner determines that the inventions are distinct, a restriction would not be proper because the applicants have demonstrated that the inventions are not independent for the reasons described above.

Combining the claims of Groups III, IV, and VI would not place a serious burden on the Examiner. A search strategy that identifies art references related to methods for building a weighted voting scheme based on gene expression data would also undoubtedly identify references that relate to methods for assigning samples to a class or classify samples using the weighted voting scheme based on gene expression data. For example, a reference that may discuss classification of a sample will likely also discuss how the classification was done. As a result, the Examiner would not be placed under an undue burden if the above-mentioned claims were combined. Hence, Applicants respectfully request examination of the claims of these groups in one application.

Pursuant to 37 C.F.R. 1.63(d)(4), please note that a Notice of Change of Correspondence Address was submitted in parent Application No. 09/544,627. Please send all correspondence in the above-identified continuation application to: Customer No. 021005; Hamilton, Brook, Smith & Reynolds, P.C., 530 Virginia Road, P.O. Box 9133, Concord, Massachusetts 01742-9133. In addition, please direct all telephone calls to the undersigned or Lisa M. Treannie at (978) 341-0036, and all facsimile communications to (978) 341-0136.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By 

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Dated:

2/12/02